(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



. | 1881 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

(43) International Publication Date 29 April 2004 (29.04.2004)

PCT

(10) International Publication Number WO 2004/036936 A1

(51) International Patent Classification⁷: H04B 3/36, H04H 1/00

H04Q 7/20,

(21) International Application Number:

PCT/US2003/032580

(22) International Filing Date: 16 October 2003 (16.10.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/418,342 16 October 2002 (16.10.2002) 60/503,490 17 September 2003 (17.09.2003)

(71) Applicant (for all designated States except US): AN-DREW CORPORATION [US/US]; 13595 Dulles Technology Drive, Suite 200, Herndon, VA 20171 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): KENNEDY, Joseph, P., Jr. [US/US]; 11127 Elmview Place, Great Falls, VA 22066 (US). GRAVELY, Thomas, B. [US/US]; 11693 Hanna Overlook Court, Herndon, VA 20170 (US). BECK, Andrew [US/US]; 21576 LeFevre Inn Drive, Ashburn, VA 20148 (US). CARLSON, John, P. [US/US]; 12006 Trossack Road, Herndon, VA 20170 (US). ALLES, Martin [US/US]; 2421 Williams Avenue, Vienna, VA 22180 (US).

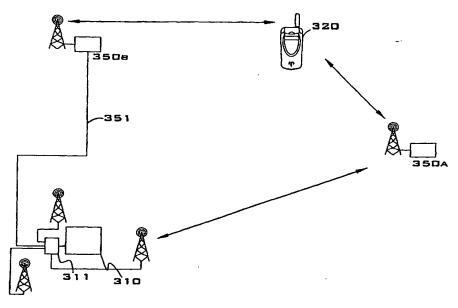
- (74) Agent: COMTOIS, Mark, C.; Duane Morris LLP, 1667 K Street, N.W., Suite 700, Washington, DC 20006 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

of inventorship (Rule 4.17(iv)) for US only

[Continued on next page]

(54) Title: SYSTEM AND METHOD FO OPERATION FOR NETWORK OVERLAY GEOLOCATION SYSTEM WITH REPEATERS



(57) <u>Abstract</u>: A novel system and method for a network overlay geolocation system operating in a host wireless communication system with repeaters (350a, 350b) is disclosed. Embodiments of the novel system and method enable the geolocation system to determine if signals being received by the geolocation system arrive directly from a target mobile appliance or if the signals are passing through a repeater (350a, 350b) and therefore are subject to a known time delay. Embodiments of the novel system and method provide a more accurate geolocation of mobiles served by repeater stations than capable in the prior art.